

ABSTRACT

A partitioning technique utilized by a translator to divide the subject code space into regions, referred to hereafter as partitions, where each partition contains a distinct set of basic blocks of subject code and corresponding target code. The partitioning technique divides the translator's representation of subject code and subject code translations into non-overlapping regions of subject memory. In this manner, when the subject program modifies subject code, only those partitions actually affected by the self-modifying code need be discarded and all translations in unaffected partitions can be kept. This partitioning technique is advantageous in limiting the amount of target code that must be retranslated in response to self-modifying code operation. In another process, the partitioning technique allows multithreaded subject programs that also involve self-modifying code to perform code modification in a thread-safe manner